

# Comparisons of Job Characteristics

**Focus Occupation: Biochemists and Biophysicists (19-1021)**

**Associated Occupation: Biological Scientists, All Other (19-1029)**

[Compare Knowledge](#)

[Compare Skills](#)

[Compare Abilities](#)

[Compare Detailed Work Activities](#)

[Compare Tools and Technologies](#)

<<	Focus occupation element is much lower
<	Focus occupation element is lower
0	Focus occupation element is at a similar level
>	Focus occupation element is at a higher level
>>	Focus occupation element is at a much higher level

## Knowledge

Similarity of Focus Occupation to Associated Occupation: 83

**Focus Occupation: Biochemists and Biophysicists (19-1021)**

**Associated Occupation: Biological Scientists, All Other (19-1029)**

Associated Occupation's Key Knowledge Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation
Biology	3.7	24.4	20.3	<< Extensive education and/or training may be required
English Language	11.2	18.2	13.5	<< Extensive education and/or training may be required
Chemistry	4.8	16.4	16.3	0 Current knowledge level may be sufficient
Mathematics	9.2	14.7	12.1	< Expanded education and/or training may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

## Skills

Similarity of Focus Occupation to Associated Occupation: 96

**Focus Occupation: Biochemists and Biophysicists (19-1021)**

**Associated Occupation: Biological Scientists, All Other (19-1029)**

Associated Occupation's Key Skills Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation
Reading Comprehension	10.7	18.5	16.4	< A higher skill level may be required
Writing	9.2	16.2	16.5	0 Current skill level may be sufficient
Science	4.5	16.1	16.3	0 Current skill level may be sufficient
Critical Thinking	10.8	15.7	15.9	0 Current skill level may be sufficient
Active Learning	8.7	15.0	16.1	0 Current skill level may be sufficient
Judgment and Decision Making	9.4	13.2	14.1	0 Current skill level may be sufficient
Complex Problem Solving	9.1	13.1	11.0	< A higher skill level may be required
Mathematics	6.2	12.6	12.7	0 Current skill level may be sufficient
Learning Strategies	7.2	12.2	13.2	0 Current skill level may be sufficient

Systems Analysis	6.5	11.0	11.1	0	Current skill level may be sufficient
Systems Evaluation	6.4	10.5	10.1	0	Current skill level may be sufficient
Management of Material Resources	3.7	6.6	5.8	<	A higher skill level may be required
Programming	2.2	5.1	7.0	>>	Skill level is likely more than sufficient

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

## Abilities

Similarity of Focus Occupation to Associated Occupation: 98

Focus Occupation: Biochemists and Biophysicists (19-1021)

Associated Occupation: Biological Scientists, All Other (19-1029)

Associated Occupation's Key Abilities Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation	
Written Comprehension	11.0	18.5	16.4	<	Some improvement in abilities may be required
Oral Comprehension	12.5	17.9	15.9	<	Some improvement in abilities may be required
Written Expression	9.8	17.9	17.8	0	Current ability level may be sufficient
Oral Expression	12.4	17.1	17.0	0	Current ability level may be sufficient
Inductive Reasoning	10.2	16.1	17.5	0	Current ability level may be sufficient
Deductive Reasoning	10.6	15.6	16.0	0	Current ability level may be sufficient
Problem Sensitivity	11.1	14.4	15.0	0	Current ability level may be sufficient
Near Vision	11.1	13.9	13.8	0	Current ability level may be sufficient
Mathematical Reasoning	6.3	13.3	12.4	0	Current ability level may be sufficient
Category Flexibility	9.0	13.2	16.1	>	Current ability level is likely sufficient
Number Facility	6.3	11.8	11.2	0	Current ability level may be sufficient

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

There are no common work activities.

## Tools and Technologies that Both Occupations Have in Common

Similarity of Focus Occupation to Associated Occupation: 86

Focus Occupation: Biochemists and Biophysicists (19-1021)

Associated Occupation: Biological Scientists, All Other (19-1029)

Tools and Technologies	Exclusivity
Autoclave and sterilizer equipment and accessories	12
Business function specific software	1
Chemical evaluation instruments and supplies	10
Chromatographic measuring instruments and accessories	16
Clinical and diagnostic analyzers and accessories and supplies	18
Computers	1
Content authoring and editing software	1

Data management and query software	1
Development software	4
Electrochemical measuring instruments and accessories	9
General laboratory glassware and plasticware and supplies	13
Indicating and recording instruments	2
Industry specific software	1
Information exchange software	1
Laboratory baths	24
Laboratory centrifuges and accessories	13
Laboratory cooling equipment	25
Laboratory electron and solid state physics equipment	29
Laboratory electrophoresis and blotting system and supplies	26
Laboratory enclosures and accessories	17
Laboratory heating and drying equipment	13
Laboratory incubating equipment	20
Laboratory mixing and stirring and shaking equipment and supplies	19
Laboratory ovens and accessories	15
Laboratory pumps and tubing	23
Laboratory water purification equipment and supplies	29
Medical computed tomography CT or CAT systems and related products	27
Medical magnetic resonance imaging MRI products	33
Network applications software	1
Operating environment software	12
Pipettes and liquid handling equipment and supplies	16
Safety apparel	4
Spectroscopic equipment	10
Test Tubes	26
Viewing and observing instruments and accessories	4
Weight measuring instruments	7

Not all positions in these occupations will necessarily use all of the listed tools and technologies. The exclusivity rating is an indication of how unique the tool or technology is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations use that tool or technology.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.